

## **REMARKS**

Claims 1-56 are pending. Claims 1-11, 24-26, 28, 29, 34-39, 45 and 47-55 are rejected. Claims 12-23, 27, 30-33, 40-44 and 46 are objected to. Claim 1 is cancelled and new claim 56 added. Claims 2-3, 17, 23-25, 27-31, 34, 40, 45 and 47 are amended to more clearly set forth the claimed subject matter. Support for the amendments is found throughout the application, for instance in the specification including pages 10-15 and the claims as originally filed. No new matter is added. Claims 2-56 are therefore presented for further reconsideration at this time. Applicants respectfully request reconsideration and withdrawal of all rejections and objections.

### **Claim Objections**

Claim 17 is objected to for an alleged lack of antecedent basis. Applicants respectfully submit that the objection is moot in view of the amendments indicated herein.

Claims 23-25, 27-31, and 34 are objected to for allegedly containing numbers in parenthesis that reference the drawings while the other claims do not. Applicants respectfully submit that this objection is moot in view of the amendments indicated herein.

Claims 12-23, 27, 30-33, 40-44 and 46 are objected to as being dependent upon a rejected base claim. Applicants respectfully submit that this objection is also moot in view of the amendments indicated herein.

Applicants urge withdrawal of all claim objections.

### **Claim Rejections – 35 U.S.C. 102**

Claims 1-2, 4-9, 10-11, 24-25, 28-29, 34, 45, 47-50, and 52-55 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 05-285920 ("JP 920").

Applicants respectfully disagree. Applicants point out that independent claim 1 is cancelled and new independent claim 56 added. It is to be noted that the present invention is concerned with automatically producing an opening or cavity in the side of a ceramic product in any part of the ceramic product.

As set forth in independent claim 56, the present invention concerns a device for producing an opening or cavity in the side of a ceramic product during product molding in a mould, the mould having a molding cavity delimited by a molding surface which has a window, the ceramic product being removable from the mould in a direction, the device comprising: a punch joined on the window in such a way that it projects into or retracts from the molding cavity, the punch having a cover and being expandable with variations in its rigidity; differential constriction means of punch shape variation; actuator means for deforming the punch which, in the active condition, change the punch shape against the opposing reaction of the constriction means, the constriction means and the actuator means producing a controlled anisotropic deformation of the punch, so that the punch projects into the molding cavity; and means for retracting the punch under the molding surface, to depress the cover and to draw the punch back into a seat, wherein the product, with the molding already complete, is removable across the direction of movement of the punch in or from its seat.

Applicants therefore respectfully submit that the cited reference fails to teach or suggest each and every element of the claimed invention. Applicants note that in the

Office Action, JP 920 has been characterized as a device comprising a punch (13) joined on a window in such a way that it projects into or retracts from a molding cavity. However, Applicants respectfully submit that in contrast to the claimed invention, this punch (13) of JP 920 does not retract under the molding surface. Accordingly, the configuration disclosed by JP 920 does not allow the product (cast slurry 3) to be removable across the direction of movement of the punch, as is required by the claimed invention. Instead, JP 920 discloses the punch (13) that is adapted to form an opening of back taper configuration in the casting product, see ¶ [0013] of JP 920, and that at the time of demolding the product, the pressure inside the punch (13) is removed and only the diameter thereof is reduced. See the figures of JP 920. In other words, in JP 920, demolding of the product is only in the same direction as the protruding direction of the punch. Clearly, this is something other than that required by the claimed invention. Accordingly, JP 920 fails to teach or suggest each and every element of the claimed invention, and the rejection should be withdrawn.

### **Claim Rejections – 35 U.S.C. 103**

Claims 3, 35-39, and 51 have been rejected under 35 U.S.C. 103(a) as being unpatentable over JP 920 in view of Herbert, Jr. (U.S. 5,087,193).

Applicants respectfully disagree since no combination of JP 920 and Herbert, Jr. provides for the claimed invention. As discussed above, JP 920 does not teach or suggest any means for retracting a punch under a molding surface or the product removable across the direction of movement of the punch, as required by the claimed invention. While the claimed invention is concerned with automatically producing an

opening or cavity in the side of a ceramic product, JP 920 teaches how to form an opening of back taper configuration in the casting product, see ¶ [0013] of JP 920, wherein the opening must be located in such a way that the product can be removed in the same direction that the punch protrudes. Applicants emphasize that since the punch of JP 920 does not retract under the molding surface, removing the product across the direction of movement of the punch, as in the claimed invention, could damage the product. Herbert, Jr. does not cure the deficiencies of JP 920. Accordingly, no combination of the cited references teaches or suggests the claimed invention, and the rejection should be withdrawn.


Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 920 in view of Gutowski et al. (U.S. 5,578,158).

Applicants respectfully disagree since no combination of JP 920 and Gutowski et al. provides for the claimed invention. As discussed above, JP 920 does not teach or suggest any means for retracting a punch under a molding surface or a product removable across the direction of movement of the punch, as required by the claimed invention. Moreover, the disclosure of Gutowski et al. is unable to cure the deficiencies of JP 920. Applicants note that the mere disclosure of silicone rubber by Gutowski et al. does not provide for any means for retracting a punch under a molding surface or removing a product across the direction of the movement of the punch. Therefore, in that the combination of cited references fails to teach or suggest the claimed invention, Applicants urge withdrawal of all rejections.

In view of the above, Applicants respectfully submit that this application is in condition for allowance and requests favorable action thereon.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. **01-2300** referencing Docket No. 023349-00253.

Respectfully submitted,



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